

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A method of operating a mobile node having a network layer and a plurality of network interfaces, each with a respective device driver, the method comprising the steps of:

transmitting communications from the network layer to any of the network interfaces by way of a multi-interface driver capable of communication with the respective device driver corresponding to each respective network interface; and

switching from a first one of the network interfaces to a second one of the network interfaces by changing the one of the plurality of device drivers with which the multi-interface driver communicates, while hiding the switching from the network layer, wherein the switching is hidden from the network layer using a virtual interface, the virtual interface presenting the appearance of always being an active interface to the network layer regardless of which of the network interfaces is being used at a given time.

2. (cancelled)

3. (previously presented) The method of claim 1, wherein data packets to be transmitted by the mobile node are addressed to the virtual interface, wherein the multi-interface driver intercepts packets addressed to the virtual interface and instead provides the packets to the second one of the network interfaces.

4. (original) The method of claim 1, further comprising:

selecting the second one of the network interfaces, based on a signal strength of each network interface and a user priority assigned to each network interface.

5. (cancelled)

6. (currently amended) ~~The method of claim 5,~~ A method of operating a mobile node, comprising:

identifying at least two available network interfaces for communications by the mobile node;

determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces; and

selecting one of the available network interfaces based on the characteristics of the respective available network interfaces, wherein a weight applied to the user priority value for each available network interface depends on the respective signal strength for the available network interface;

wherein the mobile node is communicating by way of a current network interface connection associated with a current network interface other than the selected network interface, the method further comprising:

establishing a connection between the mobile node and the selected network interface; and

maintaining the current network interface connection until after the connection between the mobile node and the selected network interface is established; and

communicating by way of the selected network interface.

7. (cancelled)

8. (currently amended) ~~The method of claim 5, wherein:~~ A method of operating a mobile node, comprising:

_____ the mobile node is currently communicating by way of a current network interface connection, and

identifying at least two available network interfaces for communications by the mobile node, wherein one of the at least two available network interfaces is a current network interface associated with a current network interface connection by which the mobile node is currently communicating;

determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

for each available network interface, calculating a score for the available network interface based on the characteristics of the available network interface;

wherein, for each of the available network interfaces, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein the ~~score is~~ scores for the available network interfaces are calculated by applying a higher weight coefficient to the signal strength of the current network interface connection than a weight coefficient applied to the signal strength of ~~than to~~ any other available network interface;

selecting one of the available network interfaces based on the respective scores calculated for the available network interfaces; and

communicating by way of the selected network interface.

9-10. (cancelled)

11. (currently amended) ~~The method of claim 10, wherein:-~~ A method of operating a mobile node, comprising:

the mobile node is currently communicating by way of a current network interface connection, and

identifying at least two available interfaces for communications by the mobile node, wherein one of the at least two available interfaces is a current network interface

associated with a current network interface connection by which the mobile node is currently communicating;

determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

selecting one of the available network interfaces based on the characteristics of the respective available network interfaces; and

communicating by way of the selected network interface;

wherein, for each available network interface, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein a weight coefficient of zero is applied to the user priority value for each available network interface having a signal strength below a respective threshold value for the available network interface;

wherein the threshold value for the current network interface connection is lower than the threshold value values for other network interfaces.

12. (original) The method of claim 1, further comprising:
automatically selecting the second network interface based on predefined criteria;
displaying an identification of the automatically selected interface;
receiving a manual override instruction from a user identifying a selection of the second network by the user; and
switching to the network selected by the user.

13. (cancelled)

14. (previously presented) A mobile node comprising:
a plurality of network interfaces, each with a respective device driver;
a virtual interface;

a network layer;

a multi-interface driver capable of communication with each network interface by way of the respective device driver for that network interface, the multi-interface driver handling communications from the network layer to any of the network interfaces;

the multi-interface driver switching from a first one of the network interfaces to a second one of the network interfaces by changing the one of the plurality of device drivers with which the multi-interface driver communicates, while hiding the switching from the network layer, wherein the switching is hidden from the network layer using the virtual interface, the virtual interface presenting the appearance of always being an active interface to the network layer regardless of which of the network interfaces is being used at a given time.

15. (cancelled)

16. (previously presented) The mobile node of claim 14, wherein data packets to be transmitted by the mobile node are addressed to the virtual interface, wherein the multi-interface driver intercepts packets addressed to the virtual interface and instead provides the packets to the second one of the network interfaces.

17. (original) The mobile node of claim 14, further comprising:

means for selecting the second one of the network interfaces, based on a signal strength of each network interface and a user priority assigned to each interface.

18-21. (cancelled)

22. (previously presented) A computer readable medium encoded with computer program code, wherein, when the code is executed by a processor, the processor performs a method of operating a mobile node having a network layer and a plurality of network interfaces, each with a respective device driver, the method comprising the steps of:

transmitting communications from the network layer to any of the network interfaces by way of a multi-interface driver capable of communication with the respective device driver corresponding to each respective network interface; and

switching from a first one of the network interfaces to a second one of the network interfaces by changing the one of the plurality of device drivers with which the multi-interface driver communicates, while hiding the switching from the network layer, wherein the switching is hidden from the network layer using a virtual interface, the virtual interface presenting the appearance of always being an active interface to the network layer regardless of which of the network interfaces is being used at a given time.

23-26. (cancelled)

27. (new) A mobile node, comprising:

means for communicating by way of a current network interface connection associated with a current network interface;

means for identifying at least two available interfaces for communications by the mobile node;

means for determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

means for selecting one of the available network interfaces based on the characteristics of the respective available network interfaces, wherein a weight applied to the user priority value for each available network interface depends on the respective signal strength for the available network interface;

means for establishing a connection between the mobile node and the selected network interface while maintaining the current network interface connection until after the connection between the mobile node and the selected network interface is established; and

means for communicating by way of the selected network interface.

28. (new) A mobile node, comprising:

means for identifying at least two available network interfaces for communications by the mobile node, wherein one of the at least two available network interfaces is a current network interface associated with a current network interface connection by which the mobile node is currently communicating;

means for determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

means for calculating, for each available network interface, a score for the available network interface based on the characteristics of the available network interface;

wherein, for each of the available network interfaces, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein the scores for the available network interfaces are calculated by applying a higher weight coefficient to the signal strength of the current network interface than to any other available network interface;

means for selecting one of the available network interfaces based on the respective scores calculated for the available network interfaces; and

means for communicating by way of the selected network interface.

29. (new) A mobile node, comprising:

means for identifying at least two available interfaces for communications by the mobile node, wherein one of the at least two available interfaces is a current network interface associated with a current network interface connection by which the mobile node is currently communicating;

means for determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority

value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

means for selecting one of the available network interfaces based on the characteristics of the respective available network interfaces; and

means for communicating by way of the selected network interface;

wherein, for each available network interface, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein a weight coefficient of zero is applied to the user priority value for each available network interface having a signal strength below a respective threshold value for the available network interface;

wherein the threshold value for the current network interface is lower than the threshold values for other network interfaces.

30. (new) A computer readable storage medium having stored thereon computer program code, wherein, when the code is executed by a processor, the processor performs a method of operating a mobile node, the method comprising the steps of:

identifying at least two available interfaces for communications by the mobile node;

determining a plurality of characteristics of each of the network interfaces, wherein the characteristics for each network interface include a signal strength value for the network interface and a user priority value indicative of a preference of a user of the mobile node for the network interface relative to other network interfaces;

selecting one of the network interfaces based on the characteristics of the respective network interfaces, wherein a weight applied to the user priority value for each network interface depends on the respective signal strength for the network interface;

establishing a connection between the mobile node and the selected network interface while maintaining the current network interface connection until after the connection between the mobile node and the selected network interface is established; and

communicating by way of the selected network interface.

31. (new) A computer readable storage medium having stored thereon computer program code, wherein, when the code is executed by a processor, the processor performs a method of operating a mobile node, the method comprising the steps of:

identifying at least two available network interfaces for communications by the mobile node, wherein one of the at least two available network interfaces is a current network interface associated with a current network interface connection by which the mobile node is currently communicating;

determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

for each available network interface, calculating a score for the available network interface based on the characteristics of the available network interface;

wherein, for each of the available network interfaces, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein the scores for the available network interfaces are calculated by applying a higher weight coefficient to the signal strength of the current network interface than to any other available network interface;

selecting one of the available network interfaces based on the respective scores calculated for the available network interfaces; and

communicating by way of the selected network interface.

32. (new) A computer readable storage medium having stored thereon computer program code, wherein, when the code is executed by a processor, the processor performs a method of operating a mobile node, the method comprising the steps of:

identifying at least two available interfaces for communications by the mobile node, wherein one of the at least two available interfaces is a current network interface associated with a current network interface connection by which the mobile node is currently communicating;

determining a plurality of characteristics of each of the available network interfaces, wherein the characteristics for each available network interface include a signal strength value for the available network interface and a user priority value indicative of a preference of a user of the mobile node for the available network interface relative to other network interfaces;

selecting one of the available network interfaces based on the characteristics of the respective available network interfaces; and

communicating by way of the selected network interface;

wherein, for each available network interface, a weight coefficient applied to the user priority value for the available network interface depends on the respective signal strength for the available network interface;

wherein a weight coefficient of zero is applied to the user priority value for each available network interface having a signal strength below a respective threshold value for the available network interface;

wherein the threshold value for the current network interface is lower than the threshold values for other network interfaces.